APDES INSPECTION REPORT

Alaska Department of Environmental Conservation
Division of Water
610 University Ave, Fairbanks, AK 99709

ADEC APDES Inspection Form Last updated (4/08)

Phone:(907) 451-2298
Fax: (907) 451-2187

Section A: General Data

Inspection Date	Permit #	Facility Type	Receiving Waters	Weather	Borough
2/1/10 -2/2/10	**AKR05CC38 WPC 900.44.002**	Stormwater MSGP	Resurrection Bay	Current Conditions: 18°F 0 Days since last snowfall >0.1 inches:	Kenai Peninsula

Discharges to: Surface Water ☒ Ground Water ☐ **ANNOUNCED** Inspection

Section B: Facility Data

Name and Location of Site/Facility Inspected

Aurora Energy Services, LLC
903 Port Ave.,
Seward, AK 99664

Loc:
Lat: 60.1222°
Long: 149.4335°

Source: NOI

Entry Time	**Permit Effective Date**
2/1 1000 hrs 2/2 0900 hrs	Feb. 26, 2009
Exit Time	**Permit Expiration Date**
2/1 1700 hrs 2/2 1200 hrs	Sept. 29, 2013

On-Site Representative

Robert Brown, Facility Manager, Usibelli Coal Mine Inc.
rob@usibelli.com

Additional Participants:

Bartly Coiley, Environmental Mgr, AES
David Mayberry, Atty, Crowell-Moring
Paul Farnsworth, Dir. Facilities, ARR
Shelli Knopik, Office Mgr, AES
Sean Lowther, ADEC Air Quality

Responsible Official(s):

Robert Brown Contacted? yes	Contacted?
Phone: (907) 745-6028 **Fax**: (907) **Email:** rob@usibelli.com	**Phone:** (907) **Fax**: (907) **Email:**

	Yes	No
Samples Taken?	☐	☒
Photos Taken?	☒	☐
Analytical Results?	☐	☒

Section C: Findings/Comments

BACKGROUND

Permit Authorization AKR05CC38 allows Aurora Energy Services, LLC (AES) to discharge storm water associated with its industrial coal transfer activities at the Seward Loading Facility under the National Pollutant Discharge Elimination (NPDES), Multi-Sector General Permit (MSGP): AKR05000. The EPA assigned the facility coverage under Sector AD of the MSGP, which authorizes AES to discharge storm water that has been managed through the implementation of a Storm Water Pollution Prevention Plan (SWPPP). Receiving waters for this discharge includes Resurrection Bay and other associated waters of the United States.

REGULATORY STATUS/ COMPLIANCE HISTORY

Records of NPDES permit compliance with EPA storm water regulations are publicly available on the EPA's Enforcement and Compliance History Online (ECHO) website at http://www.epa-echo.gov/echo/. On October 31, 2009, the ADEC received Primacy (APDES) for Phase II facilities, which included authority over storm water permitting, compliance and enforcement programs. Since that time, ADEC has received one report of possible storm water related issues at AES.

FIELD INSPECTION

On February 1, 2010, at about 1000 hrs., Environmental Program Specialist (hereinafter "Inspector") Kim Speckman met with Rob Brown, Facility Manager for AES, at their main office located at 903 Port Ave., in Seward, AK. After formally identifying herself, the Inspector was introduced to AES's Environmental Manager Bartly Coiley, and David Mayberry, Attorney with Crowell-Moring. Mr. Brown advised that the loading of the C/V Yasa Fortune had just begun.

The meeting opened with introductions and the exchange of business cards. Inspector Speckman explained that one purpose for her visit was to discuss ADEC's recent receipt of Primacy for storm water permitting, compliance and enforcement programs. The Inspector advised that main the focus of the inspection would be review of their SWPPP (detailed in the Records Review section of this report), including its implementation and any revisions that were made to address deficiencies. A short time later the group was later joined by joined by ADEC, Air Quality Inspector Sean Lowther.

In response to questions posed by Inspector Speckman, Mr. Brown and Ms. Coiley provided the following information:

- Mr. Brown has served as the AES Facility Manager for about a year. Vic Stoltz is the General Foreman.
- AES has a total of sixteen full time employees.
- Five workers are on duty during loading operations. One person is assigned to "rove", and make observations relative to dust generation from various outdoor locations and radios are used for communication.
- Nine workers are on duty during bypass loading (when the coal is transferred from the train directly to a ship).
- AES presently transfers about 800,000 tons of coal per year (last year was their second busiest year on record).
- AES has "spot sales" throughout the year, but winter tends to be their busiest season.
- Mr. Brown became the General Manager while AES was operating under the Administrative Continuance of the 2000 MSGP. He was advised by the EPA to continue to utilize their 2000 MSGP SWPPP, until the 2008 MSGP was issued, when they would be required to submit a new SWPPP.
- Mr. Brown submitted AES's new SWPPP to the EPA and ADEC during May 2009.
- In August 2009, AES created SOP's to address coal dust issues (see Appendix I).
- In September of 2009, AES revised their 2008 MSGP SWPPP, to address dust generation, belt conveyor and railroad run-on issues, and to add benchmark sampling results (Images 34-36).
- Spraying and weather conditions sometimes results in steam coming off the coal piles.
- The average rate of transfer when they are loading a ship is between 800 and 1500 tons of coal per hour.
- Scrapers have been installed to remove the build-up of coal dust along the belt conveyor (BC). According to Mr. Brown, there are a total of 25 scrapers throughout the facility, located as follows:
    1. BC 1 through 10 – primary only
    2. BC 11 primary & secondary
    3. BC 12 primary & secondary
    4. BC 13 primary & secondary
    5. BC 14 primary & secondary
    6. Tripper chute primary (located on the stacker/reclaimer)
    7. Trailer primary (located on the stacker/reclaimer)
    8. Feeder belt primary & secondary (located on the ship loader)
    9. Boom belt primary & secondary (located on the ship loader)
    10. Shuttle belt primary(located on the ship loader)
- Most of the equipment is original (from the 1980's). Some of the rollers are presently due for replacement.
- Shields have been installed on the stacker/reclaimer and the ship loader to reduce coal spillage.
- The surface under the coal yard is a mixture of sand and silt that was dredged from the bay and there is about one foot of coal on top of that. The surface is porous and there is little run-off.
- The "bag houses" which, in theory are supposed to collect dust, don't work so they use their other BMPs (scrapers, spraying and following SOPs for dust emissions instead.
- Small sections of conveyor in the coal yard are not covered to allow for the removal of build-up of snow and ice.
- A small bobcat is used to clean up snow, coal and coal dust deposits around the yard.
- Their procedure for removing snow and debris from the dock entails driving out on top of it, then removing everything back to the main office area.

Following the SWPPP review, the group went on a walk-through of the facility (refer to Images 1-3). Additionally, Mr. Brown provided the two DEC Inspectors with a follow-up tour during the morning hours of February 2nd. During the second walk-through, Alaska Railroad Director of Facilities, Paul Farnsworth joined the group. Observations documented by Inspector Speckman during the two tours included:

- The control room windows provide good views (Images 5 & 6) of the conveyor coming from the stacker/reclaimer and to the ship loader.
- Upper and lower sprayer bars were operating on the stacker/reclaimer (Image 9) as it reclaimed coal from the pile. No dust was observed to be generated.
- Scrapers were being employed to remove coal dust from sections of belt conveyor in various locations (Images 10-11)
- Several sprinkler heads were situated along the east berm next to the coal piles (Image 12).
- The entire site (coal yard and area surrounding the main office) was almost entirely covered with compacted snow and ice. The cover of snow was not fresh and in most areas it did not appear excessively dirty (Images 8-21).
- Control structures (vegetated berms, RR grade and silt fence) served to surround the site on all four sides (Images 13-17)
- A water filled ditch located outside (on the city side) of the site's west berm (Image 13) appears to receive drainage from a pond which is located outside the site's north berm, and from several other business' located between the highway and the coal loading facility.
- Both settling ponds were frozen over (Images 18-19).

- Water could be heard flowing at Outfall 1 (Image 20).
- Outfall 2 (Image 22) was surrounded by a gravel filter, and Outfall 3 (Image 21) was covered with a fabric filter and surrounded by gravel.
- Outfall 4 (Image 21) was the only area where signs of recent run-off were observed. This outfall can be characterized as a gravel road surface leading to the water-filled, vegetated ditch described in the previous paragraph.
- Lat/Longs for the four outfalls were recorded as:
    1. Outfall 1: 60°07'418"N, 149°25'.666"W
    2. Outfall 2: 60°07'423"N, 149°25'.638"W.
    3. Outfall 3: 60°07'384"N, 149°25'.718"W
    4. Outfall 4: 60°07'334"N, 149°25'.755"W
- Day 1 Tour (a few hours after the commencement of coal transfer, and at an average of 800 tons/hour): The dock alongside the conveyor was coated with coal dust, but there was not many coal chunks. An accumulation of coal dust was observed on the structure below the conveyor (Image 26). No visible dust was being generated at the end of the loading process and no coal debris was observed falling into the Bay.
- Day 2 Tour (almost 24 hours after the commencement of coal transfer, and at an average of 900+ tons/hour) : Coal dust and chunks had accumulated on the dock below the ship loader and the conveyor catwalk near the ship loader (Images 28-29). No chunks of coal were observed falling into the water but flakes of "carry-back" (congealed coal dust) were observed falling from the conveyor near the ship loader, and from the ship loader itself, into the Bay (Image 31). No visible dust was being generated at the end of the ship loading process, but dust was visible on the ship's deck and hold cover (Image 33).

Finally, on Day 2 (just prior to the second tour) Inspector Speckman walked the beach area just south of the south end of the facility, below the belt conveyor leading out to the ship. During this walk (which occurred at low tide) no dust or coal was observed on the beach, and no coal or coal debris was observed falling from the conveyor (Images 34 & 35).

SAMPLING ACTIVITIES

None

RECORDS REVIEW

Reviews of the on-site SWPPPs, including the AES 2000 MSGP SWPPP (with 2004 Revisions), and the AES 2008 MSGP SWPPP (with 2009 revisions) were conducted on Day 1 of the inspection. The review of these documents revealed that:

- Copies of the pertinent MSGP Permits, Authorizations, and correspondences with the EPA were contained in their respective SWPPP Manuals.
- Vic Stoltz has been the SWPPP Manager since about 2000.
- SWPPP Revisions and Modifications were included with the 2009 SWPPP (Images 36 & 37)
- Training in spill prevention, good housekeeping and materials management practices has been provided to AES employees at least twice per year (and more recently, several times per year) since 2000 (Image 38).
- The results of Quarterly Facility Inspections were documented (including recommendations for revised and/or additional control measures).
- Quarterly Visual Assessments of Storm Water Discharges were documented (Image 39), and one deviation from the schedule due to an oversight was properly logged.
- Benchmark monitoring results reported on December 16, 2009 (Image 40) revealed the following exceedances of Benchmark Monitoring Concentrations (BMC):
    1. Total Iron (where the BMC was 1.0 mg/L)
       Outfall 1 results: 5.42 mg/L
       Outfall 2 results: 1.69 mg/L
       Outfall 4 results: 1.35 mg/L
    2. Total Suspended Solids (where the BMC was 50 mg/L)
       Outfall 1: 55.7 mg/L
       Outfall 3: 71.3 mg/L
- The Control Room Operator's Log included entries (Images 41 & 42) concerning weather and dust observations, including those which resulted in the temporary suspension of operations due to the generation of dust.

SUMMARY

On February 1st and 2nd, 2010, the ADEC, Division of Water, Compliance and Enforcement Program conducted a SWPPP review, and inspection of the AES coal transfer facility in Seward, AK. The inspection was part of what will (since the October 31, 2009, receipt of Primacy for storm water permitting, compliance and enforcement programs) now be routine compliance monitoring of MSGP permittees in the state. This inspection focused on the review of AES on-site SWPPP and the implementation of this plan at the facility.

Section D: Compliance/Recommendations

AREAS OF CONCERN

The inspection revealed that, over the course of the past few years AES has continued to review their control measures and they have made several changes aimed at reducing dust generation and coal spillage during their coal transfer operations. The inspection also revealed that although the amounts of these pollutants being generated appear to have been substantially reduced, there is still room for improvement. Specifically:

- Dust accumulates on and below equipment, and flakes of "carry-back" were observed dropping into Resurrection Bay.
- Spilled coal was observed accumulating on the dock below the ship loader and on structural components under the belt conveyor next to the dock.
- Benchmark monitoring results exceeded benchmark parameters for Total Iron and Total Suspended Solids.

Part 2 of the 2008 MSGP stipulates that if a permittee finds that control measures are not achieving their intended effect of minimizing pollutant discharges, these control measures must be modified as expeditiously as practicable. The permit also states that "the term "minimize" means "reduce and eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practice"

Part 6 of the permit addresses Benchmark Monitoring, and states "The benchmark concentrations are not effluent limitations; a benchmark exceedance, therefore is not a permit violation." It goes on to say that benchmark monitoring data are primarily for use in determining overall effectiveness of control measures and to assist the permittee in knowing when additional corrective action(s) may be necessary. Part 6 also stipulates, in pertinent part, that "After 4 quarterly samples, if the average of the 4 monitoring values for any parameter exceeds the benchmark, you must, in accordance with Part 3.2, review the selection, design, installation, and implementation of your control measures to determine if modifications are necessary to meet the effluent limits of this permit, and either: Make the necessary modifications and continue quarterly monitoring until you have completed 4 additional quarters of monitoring for which the average does not exceed the benchmark; or Make a determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet technology-based effluent limits or are necessary to meet the water-quality-based effluent limitations in part 2 of this Permit, in which case you must continue monitoring once per year."

Action Items

1. Industry research – Conduct research to determine if any additional control measures exist in similar industries, which might be implemented to further reduce carry-back and the spillage of coal during the transfer process.

Recommendations

1. Post a sign at the transfer facility's main entrance advising that a copy of the SWPPP is on file at the Main Office, to notify the public that AES is operating under a storm water management plan.

Section E: Appendices

I. AES SOP for Dust Emissions
II. AES Dust Observation Form
III. AES Complaint Form
IV. AES Dust Prevention Training Guidelines

	Signature only acknowledges receipt of this report. Inspection report given to: Forwarded
Kim W. Speckman, Inspector Date Division of Water/Wastewater Quality Compliance	Company (if applicable): Date

PHOTO ADDENDUM – AURORA ENERGY SERVICES, LLC: 2/1&2/10

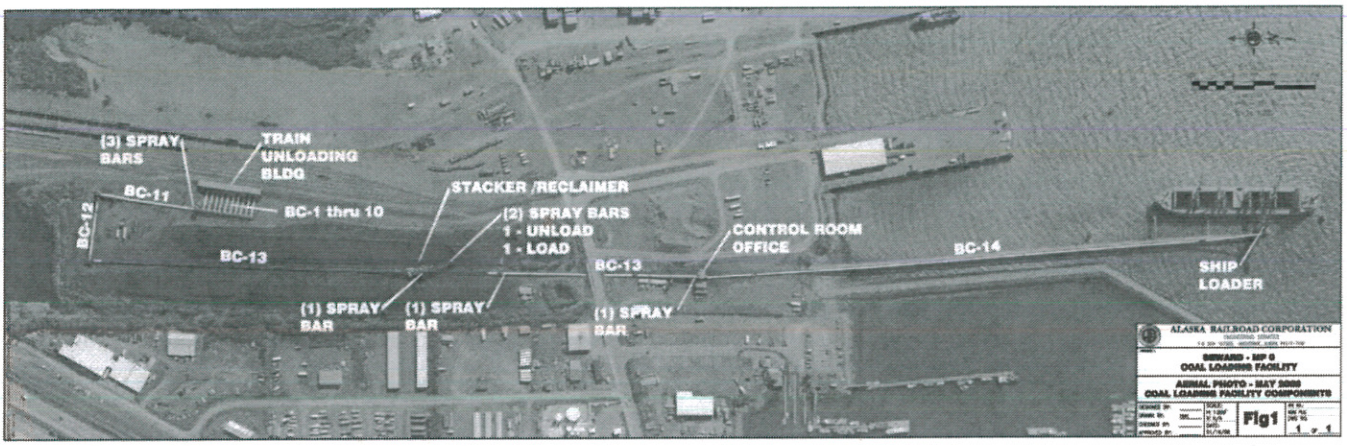


IMAGE 1: AURORA ENERGY SERVICES LLC, AERIAL SITE MAP

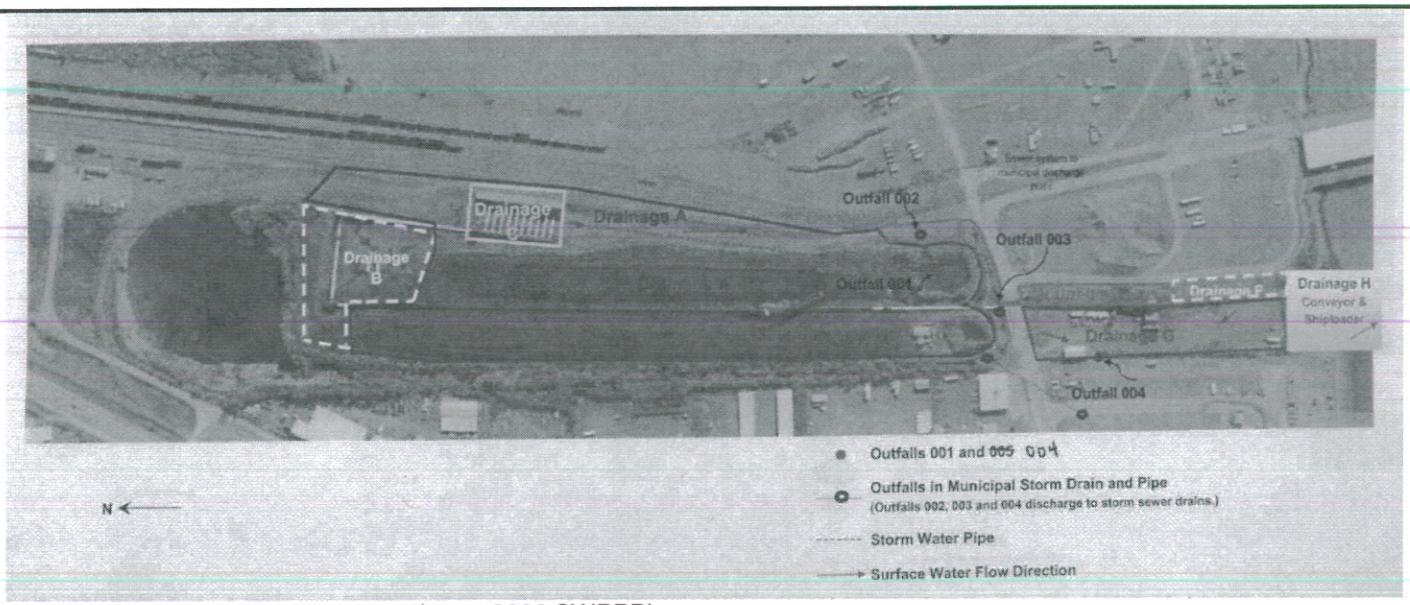


IMAGE 2: STORM WATER FLOW CHART (FROM 2009 SWPPP)

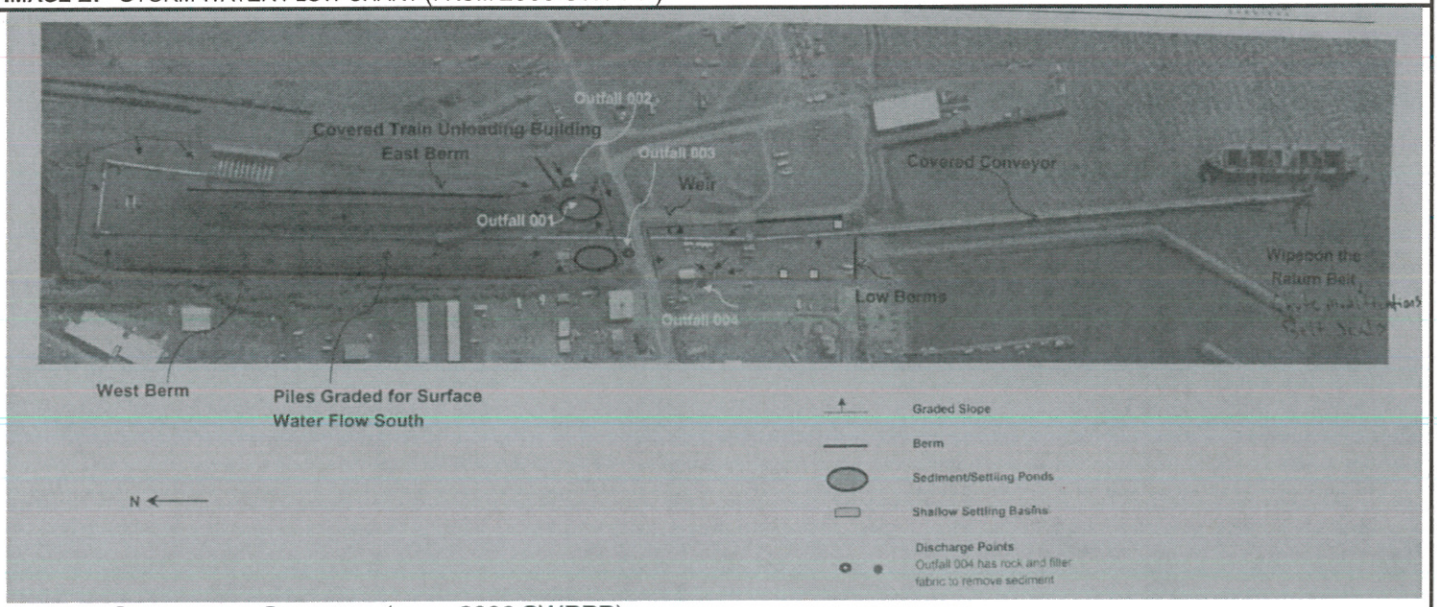


IMAGE 3: STRUCTURAL CONTROLS (FROM 2009 SWPPP)

PHOTO ADDENDUM - AURORA ENERGY SERVICES, LLC: 2/1&2/10

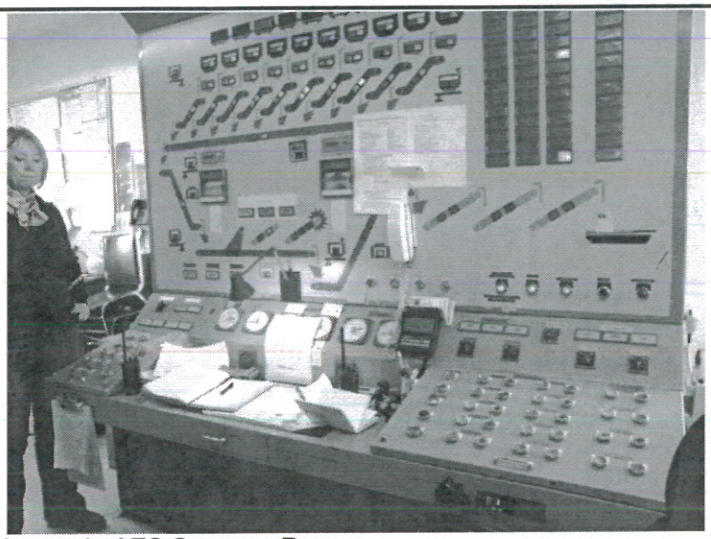


IMAGE 4: AES CONTROL ROOM

IMAGE 5: VIEW FROM CONTROL ROOM LOOKING SOUTH TOWARD THE SHIP LOADER

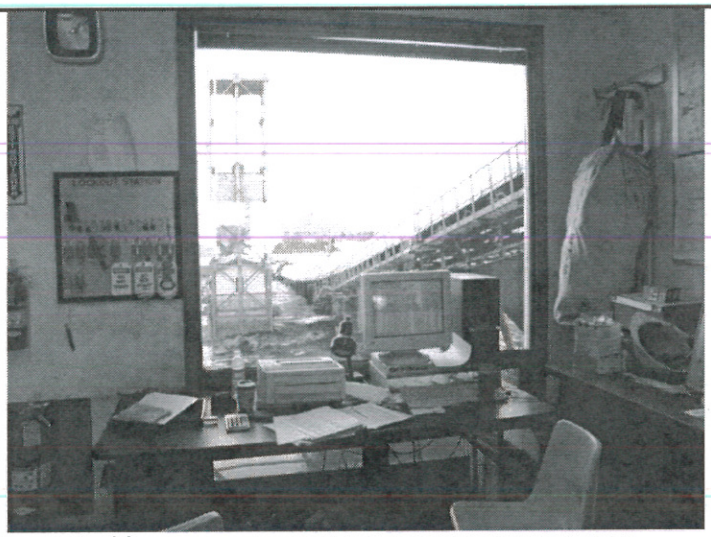


IMAGE 6: VIEW FROM THE CONTROL ROOM LOOKING NORTH TOWARD THE STACKER/RECLAIMER

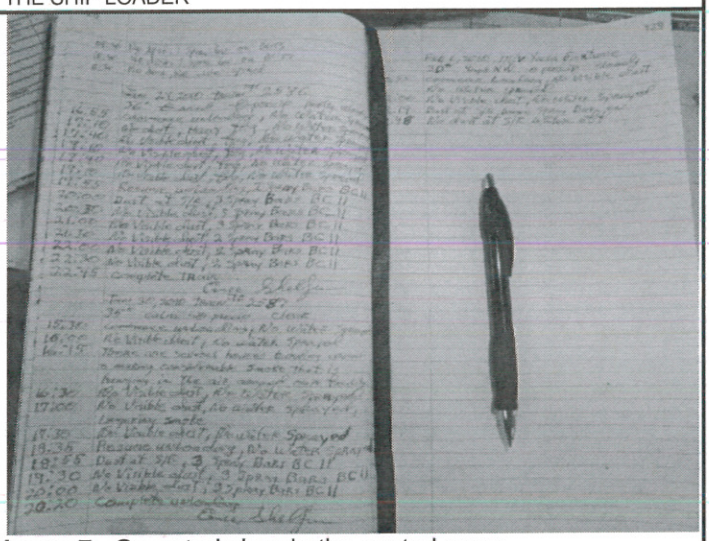


IMAGE 7: Operator's Log in the control room

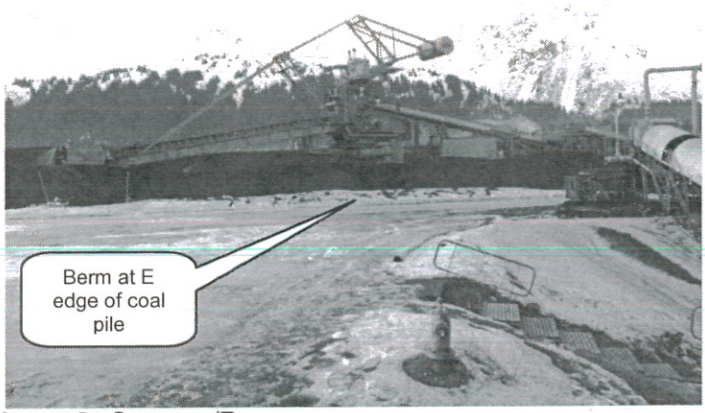


IMAGE 8: STACKER/RECLAIMER

IMAGE 9: STACKER/RECLAIMER: UPPER & LOWER SPRAYBARS

PHOTO ADDENDUM - AURORA ENERGY SERVICES, LLC: 2/1&2/10

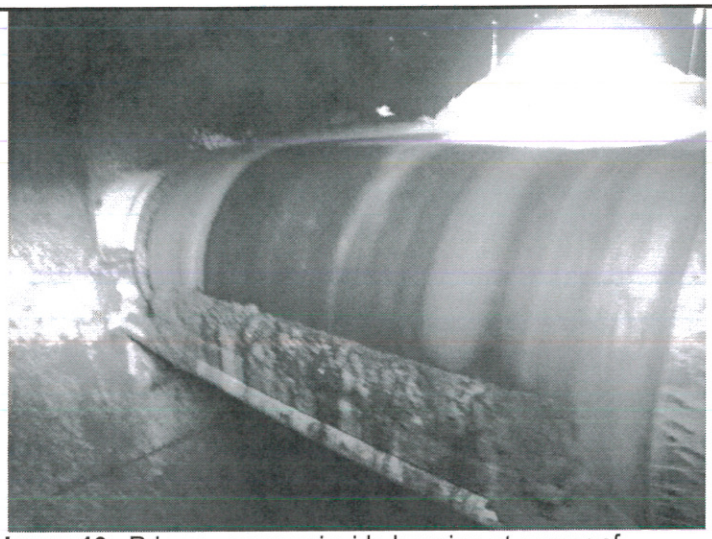


IMAGE 10: Primary scraper inside housing at corner of BC-12 and BC-13

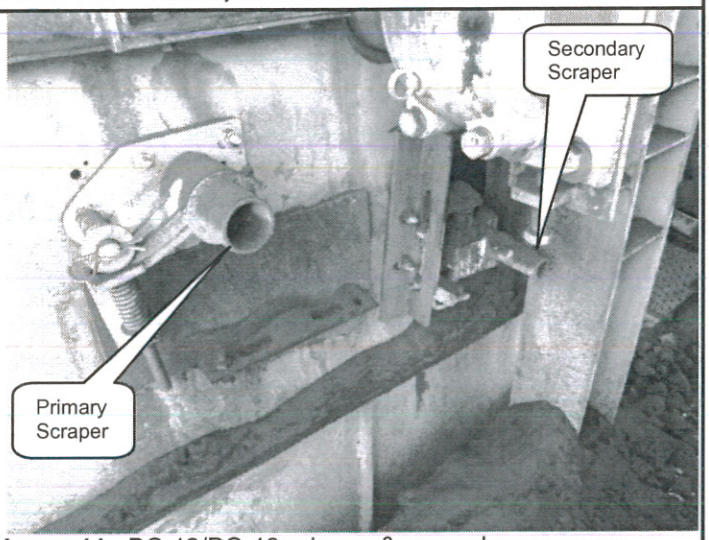


IMAGE 11: BC-12/BC-13 primary & secondary scrapers (view from housing exterior)

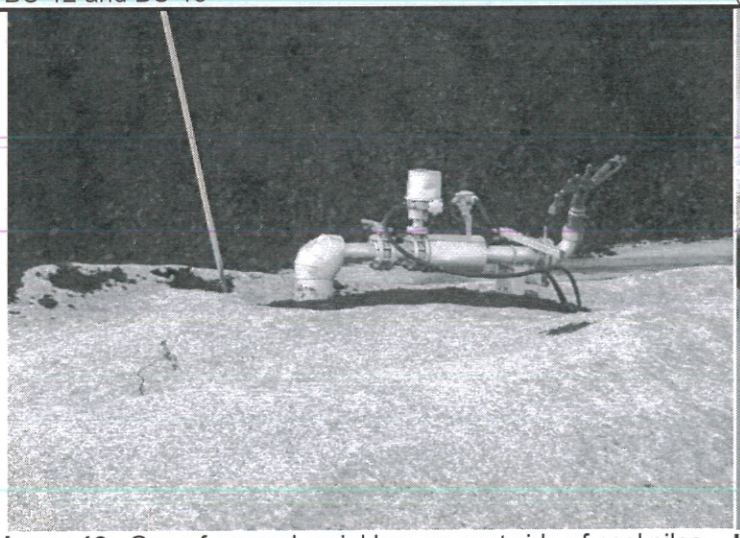


IMAGE 12: One of several sprinklers on east side of coal piles

IMAGE 13: Vegetated berm at north edge of site

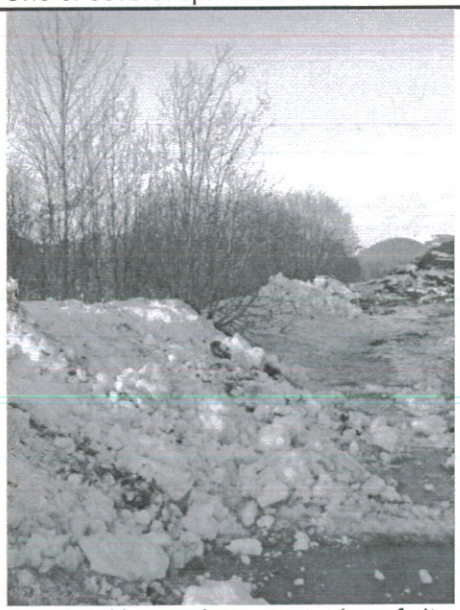


IMAGE 14: Vegetated berm along west edge of site

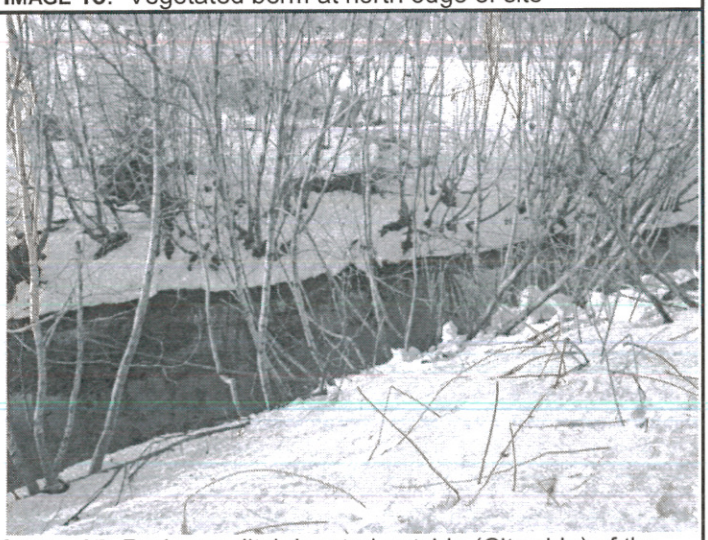


IMAGE 15: Drainage ditch located outside (City side) of the site's west berm.

PHOTO ADDENDUM - AURORA ENERGY SERVICES, LLC: 2/1&2/10

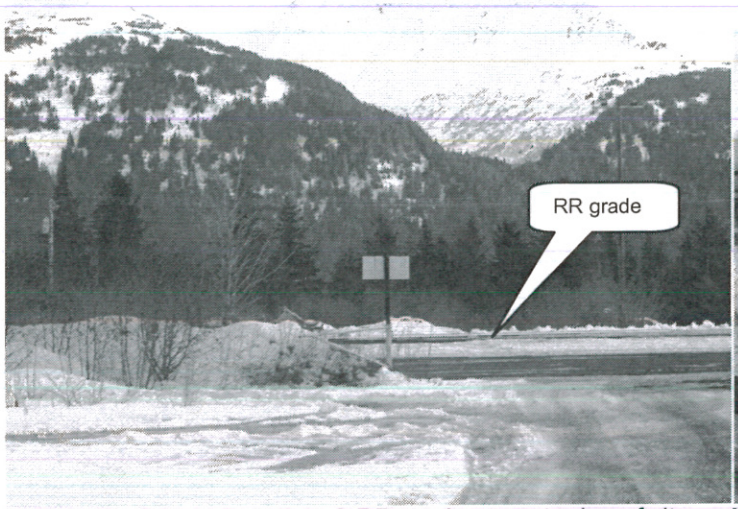


IMAGE 16: Vegetated berm & RR grade at east edge of site

IMAGE 17: Silt fence at south edge of site

IMAGE 18: West settling pond (looking N)

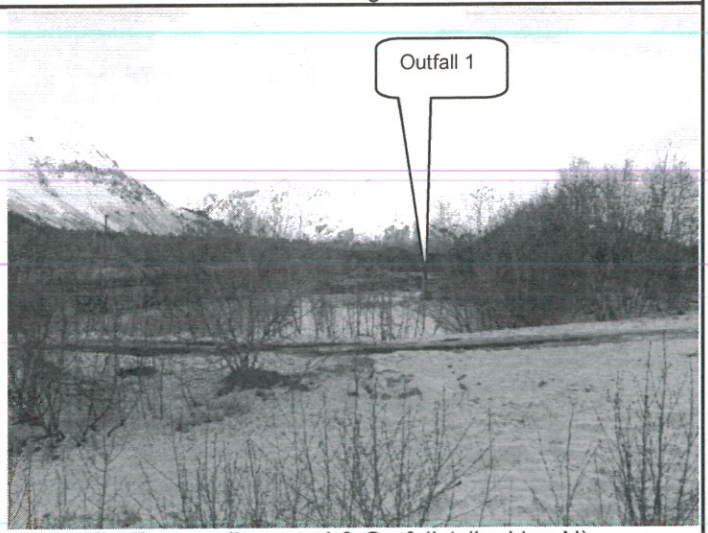


IMAGE 19: East settling pond & Outfall 1 (looking N)

IMAGE 20: Outfall 1

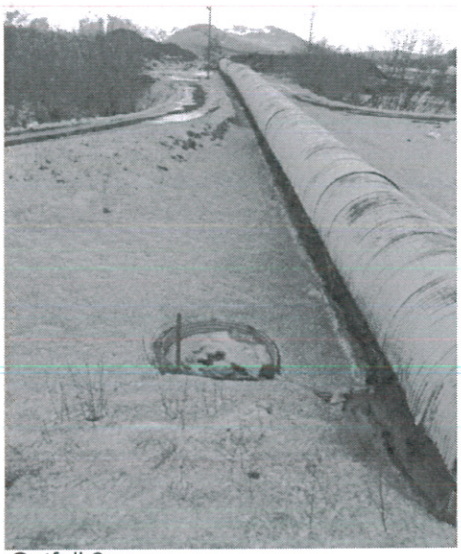


IMAGE 21: Outfall 3

PHOTO ADDENDUM - AURORA ENERGY SERVICES, LLC: 2/1&2/10

IMAGE 22: Outfall 2

IMAGE 23: Outfall 4

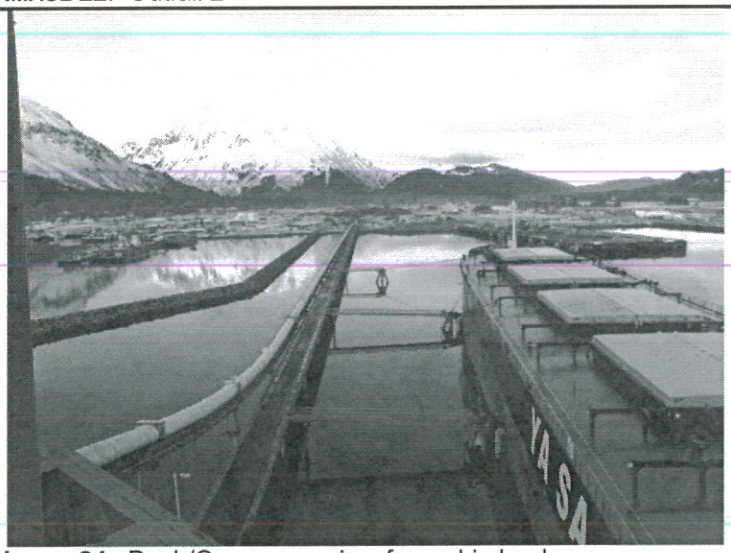


IMAGE 24: Dock/Conveyor - view from ship loader

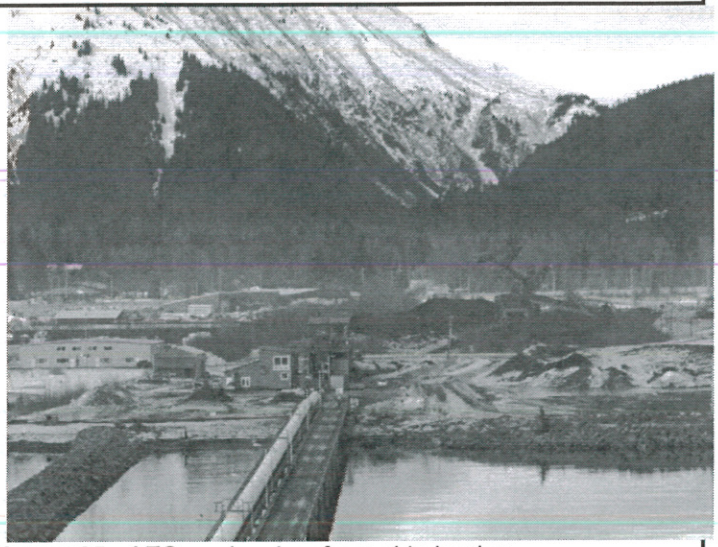


IMAGE 25: AES yard – view from ship loader

IMAGE 26: Day 1 - coal dust on cross-brace below conveyor

IMAGE 27: Coal going into hold - view from ship loader

PHOTO ADDENDUM - AURORA ENERGY SERVICES, LLC: 2/1&2/10

IMAGE 28: Day 2 - Loose coal on dock below ship loader

IMAGE 29: Coal on conveyor catwalk near ship loader

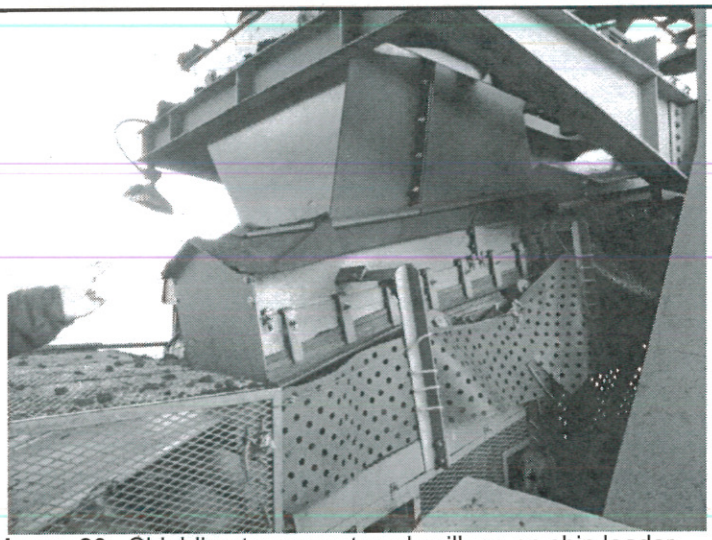


IMAGE 30: Shielding to prevent coal spillage on ship loader

IMAGE 31: Flake of "Carry-back" from conveyor belt

IMAGE 32: Coal below conveyor next to ship loader

IMAGE 33: End of loader inside hold & dust on deck

PHOTO ADDENDUM - AURORA ENERGY SERVICES, LLC: 2/1&2/10

IMAGE 34: Day 2 - beach below conveyor

IMAGE 35: Beach below conveyor – low tide

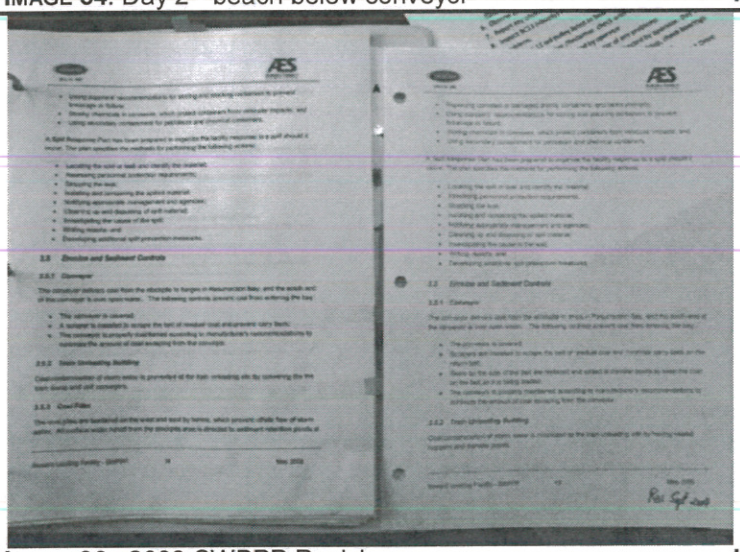


IMAGE 36: 2009 SWPPP Revisions

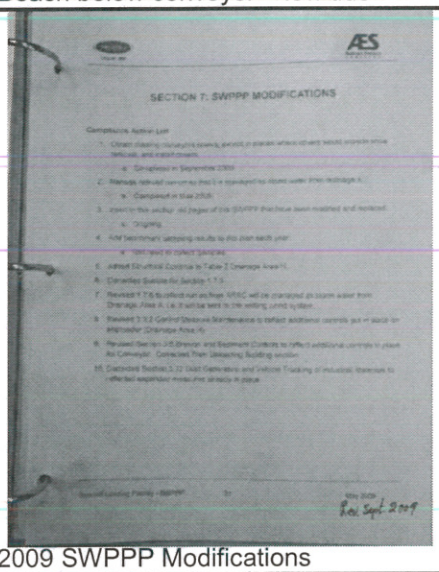


IMAGE 37: 2009 SWPPP Modifications

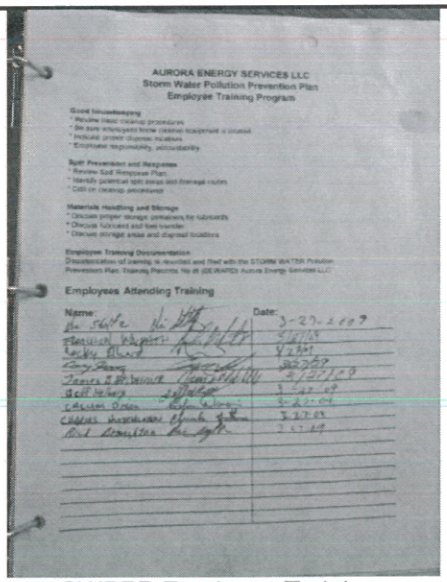


IMAGE 38: 2009 SWPPP Employee Training

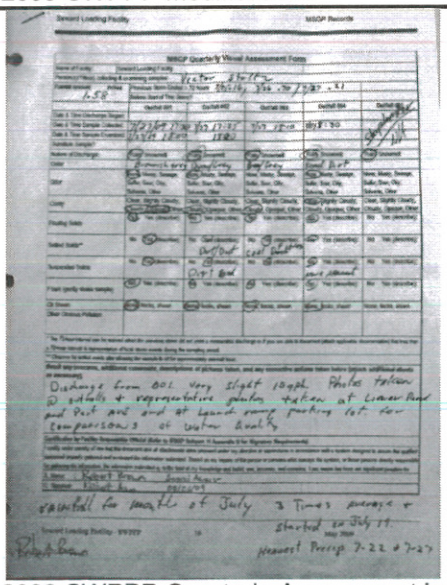
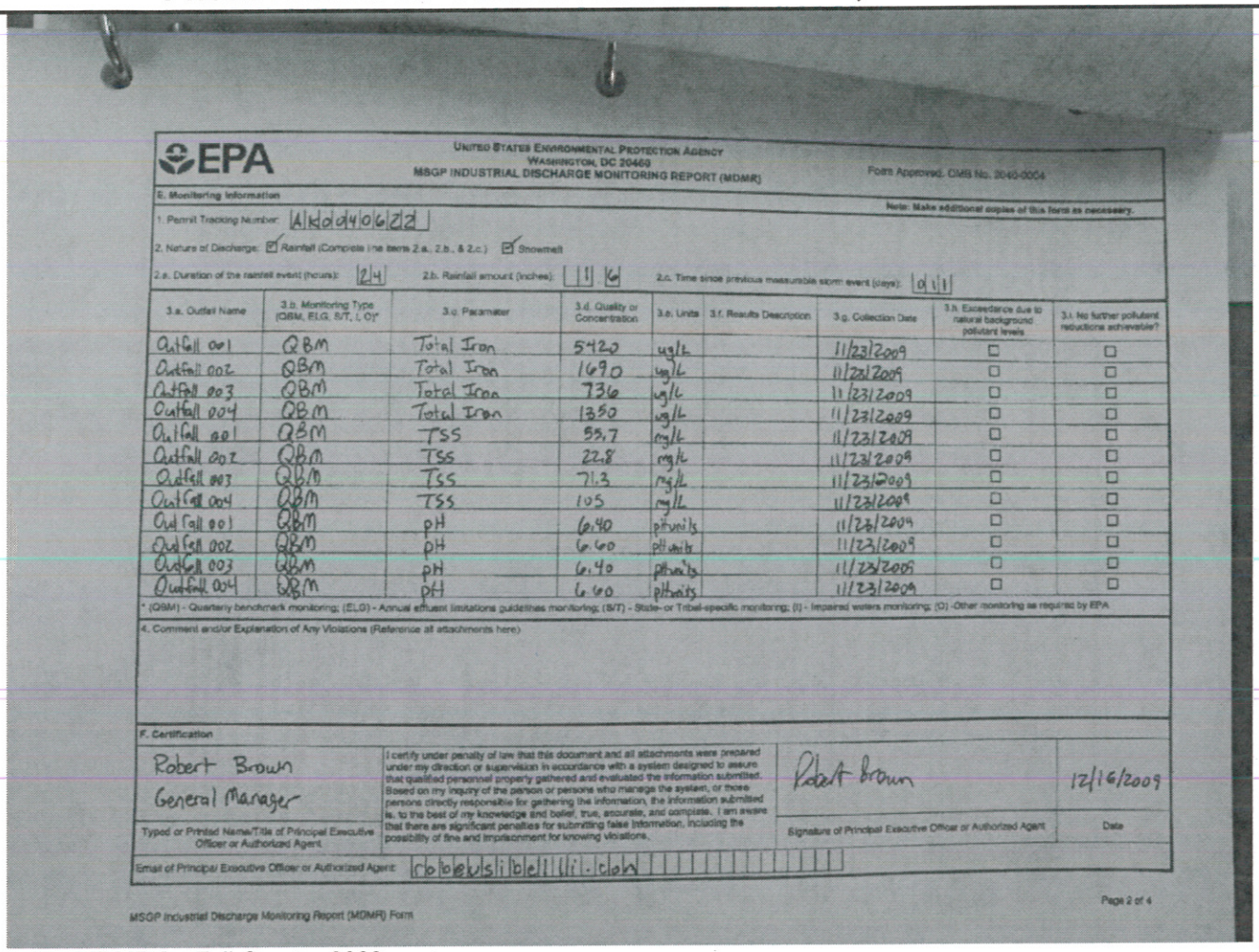


IMAGE 39: 2009 SWPPP Quarterly Assessment Log

PHOTO ADDENDUM - AURORA ENERGY SERVICES, LLC: 2/1&2/10



EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460
MSGP INDUSTRIAL DISCHARGE MONITORING REPORT (MDMR)

Form Approved. OMB No. 2040-0004

E. Monitoring Information

Note: Make additional copies of this form as necessary.

1. Permit Tracking Number: AKR064062

2. Nature of Discharge: ☑ Rainfall (Complete line items 2.a., 2.b., & 2.c.) ☑ Snowmelt

2.a. Duration of the rainfall event (hours): 24 2.b. Rainfall amount (inches): 1.16 2.c. Time since previous measurable storm event (days): 011

3.a. Outfall Name	3.b. Monitoring Type (QBM, ELG, S/T, I, O)*	3.c. Parameter	3.d. Quality or Concentration	3.e. Units	3.f. Results Description	3.g. Collection Date	3.h. Exceedance due to natural background pollutant levels	3.i. No further pollutant reductions achievable?
Outfall 001	QBM	Total Iron	5420	ug/L		11/23/2009	☐	☐
Outfall 002	QBM	Total Iron	1690	ug/L		11/23/2009	☐	☐
Outfall 003	QBM	Total Iron	736	ug/L		11/23/2009	☐	☐
Outfall 004	QBM	Total Iron	1350	ug/L		11/23/2009	☐	☐
Outfall 001	QBM	TSS	55.7	mg/L		11/23/2009	☐	☐
Outfall 002	QBM	TSS	22.8	mg/L		11/23/2009	☐	☐
Outfall 003	QBM	TSS	71.3	mg/L		11/23/2009	☐	☐
Outfall 004	QBM	TSS	105	mg/L		11/23/2009	☐	☐
Outfall 001	QBM	pH	6.40	pH units		11/23/2009	☐	☐
Outfall 002	QBM	pH	6.60	pH units		11/23/2009	☐	☐
Outfall 003	QBM	pH	6.40	pH units		11/23/2009	☐	☐
Outfall 004	QBM	pH	6.60	pH units		11/23/2009	☐	☐

* (QBM) - Quarterly benchmark monitoring; (ELG) - Annual effluent limitations guidelines monitoring; (S/T) - State- or Tribal-specific monitoring; (I) - Impaired waters monitoring; (O) -Other monitoring as required by EPA

4. Comment and/or Explanation of Any Violations (Reference all attachments here)

F. Certification

Robert Brown
General Manager

Typed or Printed Name/Title of Principal Executive Officer or Authorized Agent

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Robert Brown

Signature of Principal Executive Officer or Authorized Agent

12/16/2009

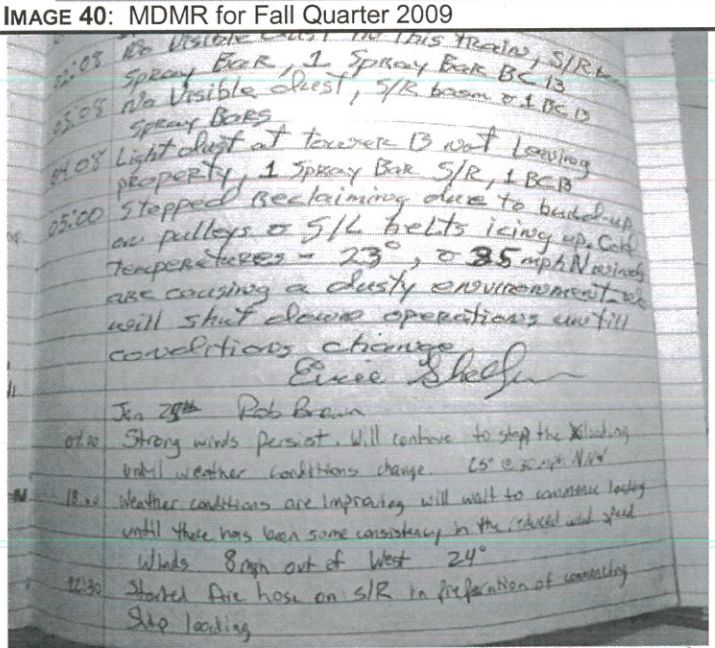
Date

Email of Principal Executive Officer or Authorized Agent: robbrown@auroraenergy.com

MSGP Industrial Discharge Monitoring Report (MDMR) Form

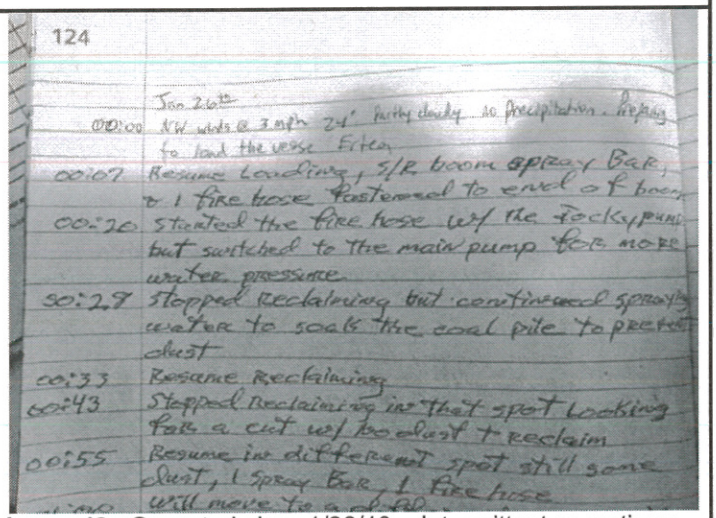
Page 2 of 4

IMAGE 40: MDMR for Fall Quarter 2009



Spray Bar, 1 Spray Bar BC 13
No Visible dust, S/R boom & 1 BC 13
Spray Bars
Light dust at Tesoro B not Leaving
property, 1 Spray Bar S/R, 1 BC 13
Stopped Reclaiming due to build-up
on pulleys & S/L belts icing up. Cold
Temperatures - 23°, & 35 mph N winds
are causing a dusty environment. We
will shut down operations until
conditions change
Elsie Shelfo
Jan 25th Rob Brown
Strong winds persist. Will continue to stop the loading
until weather conditions change. 25° @ 30 mph NW
Weather conditions are improving will wait to continue loading
until there has been some consistency in the reduced wind speed
Winds 8 mph out of West 24°
Started fire hose on S/R in preparation of continuing
Stop loading

IMAGE 41: Operator's Log – 1/24 & 25/10: Documentation of strong winds, dust & suspense of operations



124

Jan 26th
00:00 NW winds @ 3 mph 24° partly cloudy no precipitation. Preparing to load the vessel Eiter
00:07 Resume Loading, S/R boom spray Bar, & 1 fire hose Positioned to end of boom
00:20 Started the fire hose w/ the Jockey pump but switched to the main pump for more water pressure
00:28 Stopped Reclaiming but continued spraying water to soak the coal pile to prevent dust
00:33 Resume Reclaiming
00:43 Stopped Reclaiming in that spot looking for a cut w/ less dust & reclaim
00:55 Resume in different spot still some dust, 1 Spray Bar, 1 fire hose will move to a dust

IMAGE 42: Operator's Log 1/26/10 – Intermittent operations in response to weather conditions